

colored picture of a *Cattleya*, but, as is often the case in text books, it is merely a pretty picture not in any way important to the book.

As in nearly all college science texts—and the same is true in only slightly less degree of high school texts—the student will meet here nearly as many new terms as he will new words in the first year of a foreign language. The glossary gives nearly 600 technical terms, most of which will be new to the student, while others (such as xeromorphic, polyploidy, photophobic) used in the text are not given in the glossary. It may be difficult to draw the line as to which scientific terms should be included and which omitted in a book of this kind, but for students most of whom will take no further botany it seems unreasonable to require the learning of scores of words used but once in the text—and there with an explanation—and which they may never in their lives meet again.

There is nothing in the text to suggest laboratory or field work, nor references to further reading. Each chapter is followed by a concise summary, which correctly used, will be a definite help in mastering and organizing the facts given. The language throughout is clear and easily understood, so that the book may be read by a beginner with pleasure. It should satisfactorily fulfill the author's objective for the course. It will be a valuable text wherever a cultural course in botany, not to be followed by more advanced work, is given. The reviewer hopes that whenever the text is used part IV—"The Distribution of Plants in Time and Space" will not be omitted.

GEORGE T. HASTINGS

The Advance of the Fungi

The Advance of the Fungi. By E. C. Large. Henry Holt and Co., New York. 1940. Pp. 488. \$4.

Under the above title one would naturally expect to find a discussion of either the phylogeny of fungi in general or a mycological treatise. A glance at the chapter headings may have a rather discouraging effect on the young plant pathologist, for here he would find little information about individual plant diseases, which might be expected in a work on plant pathology. Nevertheless, the author deals primarily with plant-pathological problems, availing himself on every occasion of setting forth some of his philosophical or sociological ideas.

The two opening chapters on potato murrain and the famine in Ireland contain little not already familiar to the mature plant pathologist. The young student might expect to find at the close of these chapters something on the modern methods of the control of the disease. We might also expect the author to take this opportunity to answer some of those who have been criticizing the scientist because of the way his discoveries have been utilized in the construction of the deadly weapons of modern warfare. He could, in accord with Dr. Blakeslee's recent address as retiring president of the A. A. A. S., have pointed out the great contributions for good made by scientists who have shown how, for example, potato blight can be easily controlled so that famines in Ireland are no longer necessary or probable. In later chapters on Bordeaux mixture and "New Sprays for Old" methods are given for controlling the blight.

When one considers the author's sociological viewpoints he finds an excuse for a good discussion of *Phylloxera* even though aphids are not very closely related to the fungi! This chapter on *Phylloxera* would naturally be the last place one would look to find an account of Craigie's discovery of the functioning of the spermatia of wheat rust, which would naturally be included in the chapter on the "Barberry and the Wheat." Craigie's work, however, is also mentioned in the chapter "Towards Immunity" where the origin of many of the new biologic races is properly attributed to hybridization in the wheat rust.

A chapter on degeneration and virus diseases is included, no doubt because viruses as well as fungi cause disease. Here the author has briefly yet effectively given us the latest information on this type of disease.

On the whole one cannot help enjoying a leisurely reading of various chapters because the historical accounts of certain of our most destructive plant diseases are enlivened with ideas on human relations well worth pondering.

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